

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019439**Date Inspected:** 04-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Yu Jiao

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication.

OBG Bay 14

Segment 13East

This QA Inspector observed ZPMC welder Mr. Hong Liang, stencil 200113 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-Repair-1 to make repairs of OBG segment 13AE weld SEG3007AT-381. This weld had been ultrasonically rejected and was repaired in accordance with weld repair document B-WR19147. This QA Inspector observed a welding current of approximately 240 amps. The base material had been preheated with electrical heaters and Mr. Hong Liang appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Jinjiu stencil 043661 used shielded metal arc welding procedure specification WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make OBG segment 13AE weld repair SEG3019Y-053. This QA Inspector observed ZPMC had recorded a welding current of 169 amps, 25.4 volts, a welding travels speed of 118mm per minute and Mr. Wang Jinjiu appeared to be certified to make this weld. This

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weld repair was the result of ultrasonic rejections and was documented on weld repair B-WR19719. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair-1 to make a weld repair of ultrasonic rejections to OBG segment 13AE weld SEG3007L-042. ZPMC had issued weld repair document B-WR-17430 that documents the repair of this weld. This QA Inspector observed ZPMC QC had recorded a welding current of 159 amps, 25.4 volts and a welding travel speed of 112mm per minute. This QA Inspector measured a welding current of approximately 200 amps. The maximum welding current listed in the welding procedure specification is 160 amps and Mr. Yang Yunfeng had a welding current that was approximately 40 amps above this maximum limit. This QA Inspector showed ABF CWI Mr. Yu Jiao the welding current meter and Mr. Yang Yunfeng adjusted this welding machine to approximately 160 amps. Following adjustment of the welding machine, items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhu Jibo, stencil 055564 used flux cored welding procedure WPS-345-FCAW-2G(2F)-ESAB-Repair to make repairs of OBG segment 13AE weld SEG3007AT-015. ZPMC QC had recorded a welding current of 295 amps, 25.4volts and a welding travel speed of 305 mm per minute. This QA Inspector observed Mr. Zhu Jibo appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-345-SMAW-2G(2F)-FCM-Repair-1 to make a weld repair of ultrasonic rejections to OBG segment 13AE weld SEG3007AT-043. ZPMC had issued weld repair document B-WR-19150 that documents the repair of this weld. This QA Inspector observed ZPMC QC has recorded a welding current of 198 amps 25 volts and a welding travel speed of 124 mm per minute. Mr. Wang Zhengbin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Chen Chuanzong, stencil 044824 used flux cored welding procedure specification WPS-B-T-2233-ESAB to make OBG segment 14E weld SEG3019AG-005. This QA Inspector observed ZPMC QC recorded a welding of 245 amps, 25.3 volts and a welding travel speed of 115mm per minute. This QA Inspector measured a welding current of approximately 250 amps and 25.5 volts. This QA Inspector observed Mr. Chen Chuanzong appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Jian Zhou, stencil 067571 used shielded metal arc welding procedure specification WPS-B-P-2214-FCM-1 to make OBG segment 13CE welds SEG3011E-246 and 247. This QA Inspector observed ZPMC had recorded a welding current of 154 amps, 25.3 volts and a welding travel speed of 112 mm per minute. This QA Inspector observed Mr. Jian Zhou appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Zujun, stencil 052696 used flux cored welding procedure WPS-B-T-2231-ESAB to make OBG segment 13CE weld SEG3011J-422. ZPMC QC had recorded a welding current of 295 amps, 25.8 volts and a welding travel speed of 290mm per minute. Mr. Li Zujun appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract

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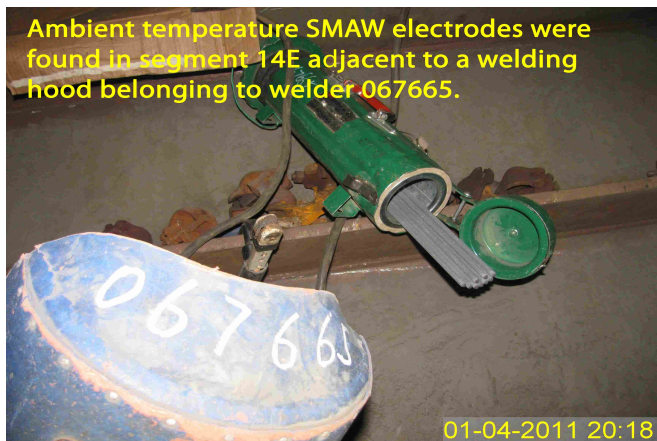
documents.

This QA Inspector observed ZPMC welder Mr. Hu Den Jiang, stencil 067877 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 13AE weld SEG3007Y-397. This QA Inspector observed ZPMC QC has recorded a welding current of 285 amps and 25.4 volts and a travel speed of 295 mm per minute. Mr. Hu Den Jiang appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Mingwu, stencil 066283 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 13AE weld SEG3007Q-136. This QA Inspector observed ZPMC QC has recorded a welding current of 254 amps and 25.8 volts and a travel speed of 232 mm per minute. Mr. Zhang Mingwu appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Gao Yuling stencil 217805 used flux cored welding procedure WPS-B-T-2133-ESAB to make OBG segment 14E welds DP3159-001-049 and 050. This QA Inspector observed QC had recorded a welding current of 257amps, 25.2 volts and a welding travel speed of 132 mm per minute. This QA Inspector measured a welding current of approximately 250 amps and 25 volts. Ms. Gao Yuling appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder 67665 appears to have left approximately fifteen (15) shielded metal arc welding (SMAW) electrodes in segment 14E near PP116. These electrodes were in rod oven storage container that was at an ambient temperature and the oven was not connected to any power. This QA Inspector informed ABF CWI Mr. Yu Jiao and he had the welding electrodes discarded. See the photographs below for additional information.



Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials

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for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
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Reviewed By:	Carreon,Albert	QA Reviewer
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